implantation and expansion would be permitted by the connector members **100**. It should also be noted that prostheses, or grafts, **70** could be flexibly connected to one another to form a graft, or prosthesis, **70'** wherein such grafts, or prostheses, **70** are formed as wire mesh tubes of the type illustrated in Applicant's co-pending application, Ser. No. 06/796,009, filed Nov. 7, 1985, entitled, "Expandable Intraluminal Graft, and Method and Apparatus for Implanting an Expandable Intraluminal Graft", which application is incorporated by reference herein.

It is to be understood that the invention is not limited to the exact details of construction, operation, exact materials, or embodiments shown and described, as obvious modifications and equivalents will be apparent to one skilled in the art. Accordingly, the invention is therefore to be limited only by the scope of the appended claims.

What is claimed is:

1. A method for implanting a plurality of prostheses within a body passageway comprising the steps of:

disposing at least one connector member between adjacent prostheses to flexibly connect adjacent prostheses to each other;

disposing the plurality of connected prostheses upon a catheter;

inserting the prostheses and catheter within the body passageway by catheterization of said body passageway; and

providing controllable expansion of at least one of the prostheses at a desired location within the body passageway by expanding a portion of the catheter associated with the prostheses to force at least one of the prostheses radially outwardly into contact with the body passageway, by deforming a portion of the at least one prosthesis with a force in excess of the elastic limit of the portion of the at least one prosthesis, to implant the prostheses within the body passageway.

2. The method of claim **1**, further including the steps of: collapsing the portion of the catheter associated with the prostheses, and removing the catheter from the body passageway.

3. The method of claim **1**, including the steps of: utilizing a catheter having an expandable, inflatable portion associated therewith; and the expansion and deformation of the prostheses and the portion of the catheter is accomplished by inflating the expandable, inflatable portion of the catheter.

4. The method of claim **1**, wherein at least one prosthesis is provided with a biologically compatible coating on the outer surface of the prosthesis.

5. The method of claim **1**, including the step of disposing the at least one connector member in a non-parallel relationship with respect to the longitudinal axis of adjacent prostheses.

6. The method of claim **1**, including the step of: utilizing a wire mesh tube as each prosthesis, the wire mesh tubes having a first predetermined collapsed diameter which permits the tubes to be disposed upon the catheter and inserted into the body passageway.

7. The method of claim **6**, including the step of disposing the at least one connector member coplanar with each wire mesh tube and non-parallel to the longitudinal axis of the wire mesh tubes.

8. The method of claim **6**, wherein tantalum is utilized for the wire mesh tube.

9. The method of claim **1**, wherein a thin-walled, tubular member is utilized as each prosthesis, each tubular member having a plurality of slots formed therein, the slots being disposed substantially parallel to the longitudinal axis of the tubular member.

10. The method of claim **9**, wherein tantalum is utilized for the tubular member.

11. The method of claim **9**, wherein the slots are uniformly and circumferentially spaced from adjacent slots and the slots are uniformly spaced from adjacent slots along the longitudinal axis of each tubular member, whereby at least one elongate member is formed between adjacent slots.

12. The method of claim **11**, wherein the thin-walled tubular member and the elongate members disposed between adjacent slots have a uniform wall thickness.

13. The method of claim **9**, wherein each thin-walled tubular member is expanded and deformed to a second diameter within the body passageway; the second, expanded diameter being variable and determined by the internal diameter of the body passageway, whereby each expanded thin-walled tubular member will not migrate from the desired location within the body passageway and the expansion of each thin-walled tubular member does not cause a rupture of the body passageway.

14. The method of claim **13**, wherein each thin-walled tubular member is uniformly, outwardly expanded and deformed along its length.

15. The method of claim **9**, including the step of disposing the at least one connector member coplanar with each tubular member and non-parallel to the longitudinal axis of the tubular members.

16. The method of claim **9**, including the step of forming the at least one connector member as a thin-walled spiral member, coplanar with adjacent tubular members.

17. A method for expanding the lumen of a body passageway comprising the steps of:

connecting a plurality of intraluminal grafts by at least one flexible connector member disposed between adjacent grafts;

inserting the plurality of connected intraluminal grafts, disposed upon a catheter, into the body passageway until the grafts are disposed adjacent a desired location within the body passageway; and

expanding a portion of the catheter to provide controllable expansion of the intraluminal grafts radially, outwardly into contact with the body passageway, by deforming a portion of the intraluminal grafts with a force in excess of the elastic limit of the portion of the intraluminal grafts, until the lumen of the body passageway at the desired location in the body passageway has been expanded, whereby the intraluminal grafts prevent the body passageway from collapsing and decreasing the size of the expanded lumen, and the intraluminal rafts remain in the passageway.

18. The method of claim **17**, including the step of disposing the at least one connector member in a non-parallel relationship with respect to the longitudinal axis of the intraluminal grafts.

19. The method of claim **17**, including the step of: utilizing a wire mesh tube as the intraluminal graft, the wire mesh tube having a first predetermined, collapsed diameter which permits the tube to be inserted within the body passageway at the desired location.

20. The method of claim 19, including the step of disposing the at least one connector member coplanar with each wire mesh tube and non-parallel to the longitudinal axis of the wire mesh tubes.

21. The method of claim 19, wherein tantalum is utilized for the wire mesh tube.

22. The method of claim 17, wherein a thin-walled tubular member is utilized as each intraluminal graft, each tubular member having a plurality of slots formed therein, the slots being disposed substantially parallel to the longitudinal axis of the tubular members.

23. The method of claim 22, including the step of disposing the at least one connector member coplanar with each tubular member and non-parallel to the longitudinal axis of the tubular members.

24. The method of claim 22, including the step of forming the at least one connector member as a thin-walled spiral member, coplanar with adjacent tubular members.

25. An expandable intraluminal vascular graft, comprising:

a plurality of thin-walled tubular members, each having first and second ends and a wall surface disposed between the first and second ends, the wall surface having a substantially uniform thickness and a plurality of slots formed therein, the slots being disposed substantially parallel to the longitudinal axis of each tubular member;

at least one connector member being disposed between adjacent tubular members to flexibly connect adjacent tubular members;

each tubular member having a first diameter which permits intraluminal delivery of the tubular members into a body passageway having a lumen; and

the tubular members having a second, expanded and deformed diameter, upon the application from the interior of the tubular members of a radially, outwardly extending force, which second diameter is variable and dependent upon the amount of force applied to the tubular members, whereby the tubular members may be expanded and deformed to expand the lumen of the body passageway.

26. The expandable intraluminal graft of claim 25, wherein at least one connector member is disposed in a non-parallel relationship with respect to the longitudinal axis of the tubular members.

27. The expandable intraluminal graft of claim 25, wherein the at least one connector member is disposed coplanar with each tubular member and non-parallel to the longitudinal axis of the tubular members.

28. The expandable intraluminal graft of claim 25, wherein the at least one connector member is a thin-walled, spiral member, coplanar with adjacent tubular members.

29. An expandable prosthesis for a body passageway, comprising:

a plurality of thin-walled tubular members, each having first and second ends and a wall surface disposed between the first and second ends, the wall surface having a substantially uniform thickness and a plurality of slots formed therein, the slots being disposed substantially parallel to the longitudinal axis of each tubular member;

at least one connector member being disposed between adjacent tubular members to flexibly connect adjacent tubular members;

each tubular member having a first diameter which permits intraluminal delivery of the tubular members into a body passageway having a lumen; and

the tubular members having a second, expanded and deformed diameter, upon the application from the interior of the tubular members, of a radially, outwardly extending force, which second diameter is variable and dependent upon the amount of force applied to the tubular member, whereby the tubular member may be expanded and deformed to expand the lumen of the body passageway.

30. The expandable prosthesis of claim 29, wherein at least one connector member is disposed in a non-parallel relationship with respect to the longitudinal axis of the tubular members.

31. The expandable prosthesis of claim 29, wherein the at least one connector member is disposed coplanar with each tubular member and non-parallel to the longitudinal axis of the tubular members.

32. The expandable prosthesis of claim 29, wherein the at least one connector member is a thin-walled, spiral member, coplanar with adjacent tubular members.

33. An apparatus for intraluminally reinforcing a body passageway, comprising:

a plurality of expandable and deformable, thin-walled tubular prostheses, each prosthesis having first and second ends, and a wall surface disposed between the first and second ends, the wall surface having a plurality of slots formed therein, the slots being disposed substantially parallel to the longitudinal axes of the prostheses, at least one connector member being disposed between adjacent tubular members to flexibly connect adjacent tubular members; and

a catheter, having an expandable, inflatable portion associated therewith and including means for mounting and retaining the expandable, thin-walled tubular prostheses on the expandable, inflatable portion,

whereby upon inflation of the expandable, inflatable portion of the catheter, the prostheses are expanded and deformed radially outwardly into contact with the body passageway.

34. The apparatus of claim 33, wherein the mounting and retaining means comprises retainer ring members disposed on the catheter adjacent the expandable, inflatable portion and adjacent the ends of the expandable, tubular prostheses.

35. An apparatus for expanding the lumen of a body passageway comprising:

a plurality of expandable and deformable thin-walled intraluminal vascular grafts, each graft having first and second ends, and a wall surface disposed between the first and second ends, the wall surface having a plurality of slots formed therein, the slots being disposed substantially parallel to the longitudinal axes of the grafts, at least one connector member being disposed between adjacent tubular members to flexibly connect adjacent tubular members; and

a catheter, having an expandable, inflatable portion associated therewith and including means for mounting and retaining the expandable, deformable intraluminal vascular grafts on the expandable, inflatable portion,

whereby upon inflation of the expandable, inflatable portion of the catheter, the intraluminal vascular grafts are expanded and deformed radially outwardly into contact with the body passageway.

36. The apparatus of claim 35, wherein the mounting and retaining means comprises retainer ring members disposed on the catheter adjacent the expandable, inflatable portion and adjacent the ends of the expandable intraluminal vascular grafts.

* * * * *

37. A balloon expandable stent prosthesis for delivery through an access artery for implantation in a coronary artery body passageway, the stent prosthesis comprising:

a plurality of thin-walled tubular members, each having first and second ends and a wall defining an outer wall surface disposed between the first and second ends, the wall having a substantially uniform thickness and a plurality of slots formed therein, the slots being disposed substantially parallel to the longitudinal axis of each tubular member, said wall having at least one coating applied thereto that contains a drug that is released into the coronary artery body passageway at the site of implantation;

at least one connector member being disposed between adjacent tubular members to flexibly connect adjacent tubular members;

each tubular member having a first diameter which permits intraluminal delivery of the tubular members into a coronary artery body passageway having a lumen; and

the tubular members having a second, expanded and deformed diameter, upon the application from the interior of the tubular members of a radially, outwardly extending force by expansion of a balloon, which second diameter is variable and dependent upon the amount of force applied to the tubular members, whereby the tubular members may be expanded and deformed to expand the lumen of the coronary artery body passageway at the site of implantation.

38. The stent prosthesis of claim 37, wherein at least one connector member is disposed in a non-parallel relationship with respect to the longitudinal axis of the tubular members.

39. The stent prosthesis of claim 37, wherein the at least one connector member is disposed coplanar with each tubular member and non-parallel to the longitudinal axis of the tubular members.

40. The stent prosthesis of claim 37, wherein the at least one connector member is a thin-walled spiral member, coplanar with the adjacent tubular members.

41. The stent prosthesis of claim 37, wherein the coating is elastic.

42. The stent prosthesis of claim 37, wherein the coating comprising a polymer.

43. The stent prosthesis of claim 42, wherein the polymer is absorbable.

44. The stent prosthesis of claim 37, wherein the coating has a plurality of openings to allow communication between the coronary artery body passageway and the interior of the tubular member.

45. The stent prosthesis of claim 43, wherein the absorbable polymer is selected from a group that comprises polyglycoides, polylacoides, and copolymers thereof.

46. The stent prosthesis of claim 37, wherein the at least one connector member is flexible.

47. The stent prosthesis of claim 37, wherein the adjacent tubular members may articulate about at least one connector member.

48. The stent prosthesis of claim 37, wherein at least one tubular member may individually function as a structure for maintaining patency of the luman of the coronary artery.

49. The stent prosthesis of claim 37, wherein the stent prosthesis is formed in a unitary structure from a continuous thin-walled tubular member.

50. The stent prosthesis of claim 37, wherein the tubular members are elongated.

51. The stent prosthesis of claim 37, wherein the coating is biologically compatible.

52. A method for implanting a plurality of balloon expandable stent prostheses within a passageway of a coronary artery; comprising the steps of:

disposing at least one connector member between adjacent stent prostheses to flexibly connect adjacent stent prostheses to each other;

disposing the plurality of connected stent prostheses upon a catheter having an inflatable balloon portion;

placing at least one coating on a wall of at least one of the stent prostheses that contains a drug that is released into the coronary artery body passageway at the site of implantation;

inserting the stent prostheses and catheter within the coronary artery body passageway by percutaneous catherization;

delivering the stent prostheses and the catheter to the site of implantation without surgically exposing the site of implantation; and

providing controllable expansion of at least one of the stent prostheses at the site of implantation within the coronary artery passageway by expanding the inflatable balloon portion of the catheter associated with the stent prosthesis to force at least one of the stent prosthesis radially outwardly into contact with the coronary artery, by deforming a portion of the at least one stent prosthesis with a force in excess of the elastic limit of the portion of the at least one stent prosthesis, to implant the stent prosthesis within the coronary artery passageway.

53. The method of claim 52, including the step of disposing the at least one connector member in a non-parallel relationship with respect to the longitudinal axis of adjacent stent prostheses.

54. The method of claim 52, including the step of utilizing a thin-walled, tubular member as each stent prosthesis, each tubular member having a plurality of slots formed therein, the slots being disposed substantially parallel to the longitudinal axis of the tubular member.

55. The method of claim 53, including the step of forming the at least one connector member as a thin-walled spiral member, coplanar with adjacent tubular members.

56. The method of claim 52, wherein the at least one connector member is flexible.

57. The method of claim 52, wherein the adjacent stent prostheses may articulate about at least one connector member.

58. The method of claim 52, wherein at least one of the adjacent stent prostheses may individually function as a structure for maintaining patency of the body passageway at the site of implantation.

59. The method of claim 52, wherein the adjacent prosthesis are elongated.

60. The method of claim 52, wherein the coating is elastic.

61. The method of claim 52, wherein the coating comprising a polymer.

62. The method of claim 61, wherein the polymer is absorbable.

63. The method of claim 52, wherein the coating has a plurality of openings to allow communication between the coronary artery body passageway and the interior of the stent prostheses.

64. The method of claim 52, wherein the coating is biologically compatible.

65. The method of claim 62, wherein the absorbable polymer is selected from a group that comprises polyglycoides, polylocoides, and copolymers thereof.